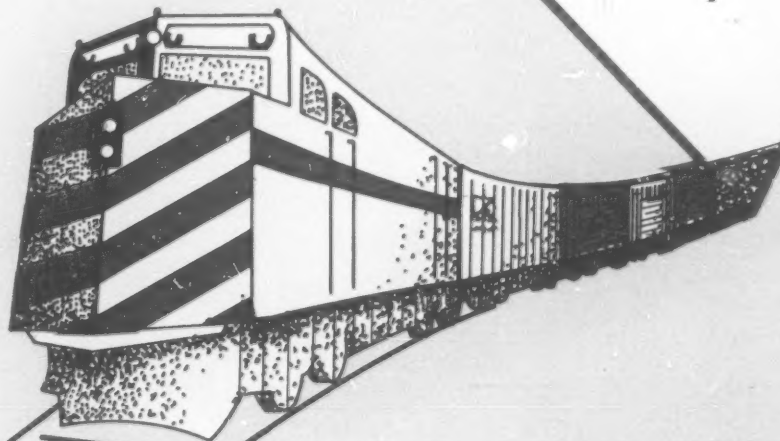


R8490-21F 4/89

The Future of Freight Railroads in the Northeast and Midwest



By William J. Watt

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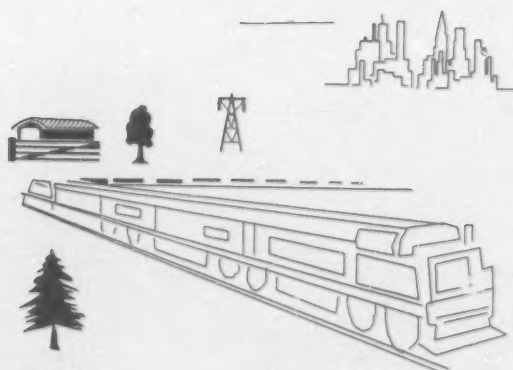
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November 1988



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ISBN 0-929061-04-7

Introduction

If the general public were polled on the subject of railroads, comments probably would show limited real knowledge. Some might lament the presumed death of passenger service, assuming that surviving railroads are decrepit dinosaurs. Others might say something to the effect of, "It's sure too bad we let the railroads get run down, because we'll need them if there's another war."

Among government policymakers at the state and local levels, perceptions are somewhat different, inclining toward real or imagined economic losses associated with the abandonment of branch lines. Here, too, the lament over the "death" of passenger service occasionally is voiced, or the wish that an Amtrak route somehow could be revived and a use found for that old station down at the foot of Main Street.

Both sets of perceptions are rooted in memories from the 1960s and 1970s, when evidence abounded of serious disruption and decay. Struggling railroads shed passenger service and branch lines. Notorious bankruptcies, like those of Penn Central, provided a steady diet of horror stories such as track conditions so bad that boxcars would derail while standing still. These perceptions are strongest in the East and Midwest, the two regions in which ailing railroads predominated during that troubled era.

The reality of freight railroads in the Northeast-Midwest region bears little relationship to these commonly held viewpoints. In contrast to the Penn Central era, a rather dramatic turnaround has occurred in the quality of both rail service and the operating companies' balance sheets. One hesitates to characterize the resurgence as "remarkable" because nagging problems and uncertainties exist that compel forecasts of the industry's future to include quite a bit of hedging. Although net incomes for eastern carriers have improved from the levels of the 1970s, they have been flat or in slight decline since the early 1980s.

This report discusses key trends and issues affecting current and future operations of the freight railroad system. It emphasizes freight railroads operating in the historic "trunkline" district of the East and Midwest--roughly east of the Chicago and St. Louis gateways, and north of the Ohio and Potomac rivers.

This geographical region was more easily analyzed when few railroads overlapped these boundaries. Today, among the three main carriers in the Northeast-Midwest region, only the Consolidated Rail Corporation (Conrail) system is limited to this area. Both Norfolk Southern (NS) and CSX Corporation also operate extensively in the Sunbelt east of the Mississippi River. Isolating data for the eastern predecessors of these two corporate giants is becoming increasingly difficult. Reference data compiled annually by the Association of American Railroads abolished the distinction between "eastern" and "southern" carriers in 1987. The expansion of these transportation companies into the truck and barge-business also requires the analyst to go much deeper than the bottom line of an income statement to get an accurate portrayal of the health and prospects of their rail components.

A change in accounting methodology from the old "betterment" accounting formula that treated assets in terms of replacement costs, usually taken as a one-time expense item, to a depreciation-based accounting system further clouds the picture. Finally, in selecting statistical measures to evaluate the performance of these companies, the analyst cannot lose sight of the fact that railroads are very capital-intensive. For these reasons, this report attempts to limit the uses of data to those that provide meaningful comparisons.

Adding more complications, much of the readily available industry data is limited to the so-called "Class I" railroads, those with annual revenues above the \$89-million threshold. This classification understates the growing importance of short lines and regional railroads.

The omission of rail passenger service, both commuter and Amtrak, is deliberate. Intercity passenger operations now represent an economic, social, and political equation that bears little relationship to the freight railroads. Passenger issues deserve a separate report. As noted, there already is far too much confusion for the public, which tends not to distinguish between the two or gives greater prominence to passenger issues. People are more likely to purchase a Metroliner ticket than enter into a freight service contract.

The following report is written for policymakers who are unfamiliar with the issues and trends that affect railroading in the Northeast and Midwest. Its audience is the "generalist" at local, state, or federal levels--not the transportation professional.

Freight Railroads in Perspective

In February 1974, with much of the region's rail mileage in bankruptcy and Penn Central hemorrhaging cash at a rate of nearly \$1 million a day, the U.S. Department of Transportation (DOT) issued its report: *Rail Service in the Midwest and Northeast Region*. Intended as a preliminary blueprint for restructuring the bankrupt lines, the report spurred a torrent of criticism from state and local officials for its designation of thousands of miles of solvent railroad lines as "potentially excess" and candidates for eventual abandonment.

Nonetheless, the report offered a fairly realistic appraisal of the situation.¹ It described several factors that had contributed to the decline of the region's rail system. Among external factors were:

- limited access to capital due to low profits historically;
- trends in intermodal competition that diverted traffic to trucks and waterways;
- shifts in regional demand, a consequence of industrial relocation to the Sunbelt and decentralization of manufacturing;
- unbalanced patterns of federal investment that intensified the diversion of traffic to other modes; and
- adverse regulatory policies.

Some internal factors were:

- operating inefficiencies;
- low service quality;
- resistance to change by both management and labor; and
- lack of innovation in marketing, pricing, and operating procedures.²

These problems did not develop overnight. The U.S. rail industry was overbuilt excessively even during the period in which it held a near-monopoly as the mover of intercity freight: 254,000 route miles in 1910, five competing lines between Chicago and Omaha, and six main lines from Chicago to the Mid-Atlantic ports. About the time that route mileage reached its greatest extent, transport capacity was expanded by innovations in signaling, centralized traffic control, yard and terminal throughput, and improved equipment that permitted longer trains and heavier carloads. The traffic base began to erode in the 1920s as the nation's highway network multiplied in size and as manufacturing relocated to the Great Lakes states from New England and the Mid-Atlantic states.

The crisis period occurred in the 1950s, when a combination of developments inflicted a series of hammer blows to the industry. Railroads had just completed an extensive and costly post-war reequipment

¹U.S. Department of Transportation, *Rail Service in the Midwest and Northeast Region*, 2 volumes (Washington, D.C.: U.S. Government Printing Office, February 1974).

²*Ibid.*, vol. I, p. 5.

of their passenger fleets when the Boeing 707 revolutionized intercity air travel. Meanwhile, construction of the interstate highway system diverted both passengers and freight to the roadways. The opening of the St. Lawrence Seaway in 1958 offered an ominous portent of another form of cheap, government-subsidized transportation. Finally, a sharp and prolonged recession from 1958 to 1961 slashed revenues for the region's rail carriers. Because the industry is burdened by high operating costs for track and equipment and high debt service by its capital-intensive nature, modest declines in revenue can wreak havoc to the bottom line. Most eastern roads posted substantial deficits during this economic downturn.³

Less visible to railroad managers of that era was the changing nature of manufacturing, which increasingly produced goods higher in value and lighter in weight--therefore more susceptible to diversion to trucks. In addition, relocation of manufacturing plants and more specialization, trends that accelerated in the automotive industry during this period, scattered the origins and destinations of auto-related shipments. These changes increased the cost of providing service and placed a higher premium on quality service. Railroads of that era had difficulty making the necessary adjustments to these trends, which by their very nature would have diverted some traffic to trucks.

The legacy of the misfortunes of the 1950s was an industry seemingly paralyzed by hostile economic circumstances and downright fearful of its future prospects. Management seized upon two related strategies. Foreseeing continued traffic declines, rail managers embarked upon a program of downsizing their systems. It was easy to conclude that a railroad should not reinvest in its routes and equipment because low profit margins made it difficult to finance asset replacement; many managers questioned the wisdom of maintaining routes whose traffic was drying up anyway. The abandonment petition replaced the track gang. The other priority was merging carriers in hopes of reducing burdensome fixed costs of operation and maintenance, while maximizing tonnage and revenues on the routes that remained.

In retrospect, both strategies were somewhat flawed, although many route abandonments were justified because of the historic overbuilding of the rail system. Railroads could have sustained some routes had they been able to offer quality service and aggressive marketing, two characteristics that seemed to be in short supply. Moreover, as one views the success of a number of short line and regional railroad operations in the 1980s, it appears that some companies missed opportunities for similar divestitures during the 1960s and 1970s. Mergers, in many cases, turned out to be ineptly fashioned and poorly executed. Political pressure made disposal of duplicate routings difficult. By the time of the 1974 Department of Transportation report, Penn Central, Erie-Lackawanna, and five smaller eastern carriers were in such bad shape that the federal government had to undertake the largest overall corporate restructuring in world history. In 1976 the Consolidated Rail Corporation (Conrail) emerged from the wreckage of the eastern bankrupts.

In the 1980s, five main themes have dominated the fortunes of railroading in the Northeast and Midwest.

- Partial deregulation as a result of the Staggers Rail Act of 1980 has improved industry profitability, stimulated innovations in marketing and pricing, and prompted significant levels of capital investment. Almost all mainline track now is continuous welded rail.
- Conrail has salvaged the bankrupts and generally has met or exceeded the expectations of the federal government. The railroad was privatized in 1987.
- The other main carriers in the region--CSX and Norfolk Southern--now represent the culmination of mergers. Both have a significant presence in the East, Midwest, and South.

³Accounts of the decline of the eastern railroads can be found in Robert Sobel, *The Fallen Colossus* (New York, N.Y.: Weybright & Talley, 1977); Richard Saunders, *The Railroad Mergers and the Coming of Conrail* (Westport, Conn.: Greenwood Press, 1978); and U.S. Department of Transportation, *The Northeastern Railroad Problem* (Washington, D.C.: U.S. Government Printing Office, 1973).

- Numerous short line railroads and a limited number of regional carriers have emerged as an alternative to the former policy of abandonment.
- The operating and marketing priority of the three big carriers continues to be that of increasing traffic density on a controlled number of main lines.

The results of deregulation, emergence of short line and regional railroads, and prospects for Conrail and the two merged systems are discussed in other sections of the report. The remaining issues are dealt with more fully in the following paragraphs, which place the discussion within the context of internal and external problems set forth in the DOT report. Many developments have occurred in the 14 years since it was released; most of them are favorable.

Access to Capital Markets

Although the situation has improved considerably, railroads still trail most industry groups in terms of profitability, which in the long run is the key factor in determining access to capital. During the 1970s overall rates of return on net investment for carriers in the Eastern District (as defined by the Association of American Railroads) either were deficits or amounted to less than 1 percent. The regional average for 1985 was 3.8 percent, which represented both a real improvement and a "paper" improvement because of the change to depreciation accounting. Combined data for eastern and southern Class I roads for 1986 produced a 5 percent return on investment.⁴

Nationwide, the rate of return on shareholders' equity improved from 1970s levels generally in the 1- to 3-percent range, to 7 percent or better in recent years.⁵ Again, depreciation accounting tends to overstate the gains in real terms. Throughout the 1970s the nation's railroads incurred capital expenditures in excess of retained funds. That situation reversed itself in the early 1980s, but data for 1985 and 1986 show that the deficit pattern has reemerged because capital expenditures are at abnormally high levels (see Figure 1).⁶

The nature of capital investment also has changed. Increasingly, it is concentrating on investments in yard and terminal facilities, equipment for container or trailer traffic (piggyback), and higher-technology support services. The emphasis on concentrating traffic on core routings enables the railroads to avoid periodic reinvestment on routes of reduced traffic density that do not wear out as fast. Where abandonments of main lines have occurred, they can relocate heavy-duty track and ties to the newer core lines, thus reducing the requirement for purchase of new rail.

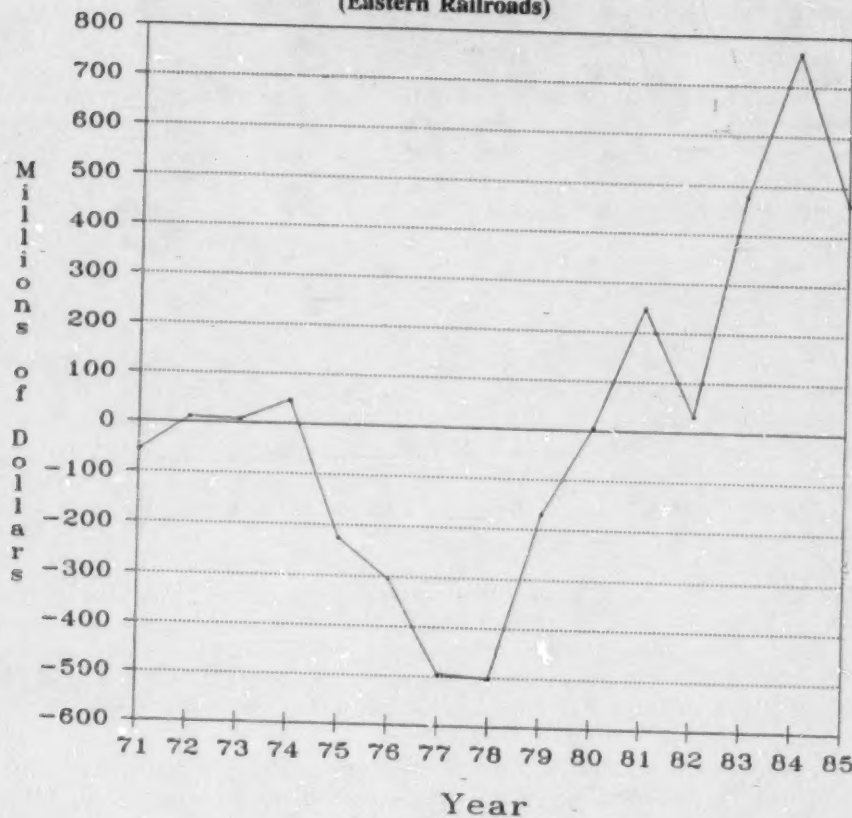
In summary, railroads in the region and nationwide now are better able to attract investment, but still rank as marginal in terms of U.S. industry overall. Railroads continue to be one of the least profitable of U.S. industries, with an average return on capital of about half that for all industry. In addition, while eastern railroads are adding value to their asset bases through investments in yards, equipment, and technology, their progress is offset to some extent by the continued process of "consuming" assets by reducing main line route miles and track miles.

⁴Association of American Railroads, *Railroad Facts*, 1986 Edition (Washington, D.C., 1986), p. 18; and *Railroad Facts*, 1987 Edition (Washington, D.C., 1987), p. 18.

⁵Association of American Railroads, *Railroad Facts*, 1987 Edition, p. 21.

⁶*Ibid.*, p. 19.

Figure 1
Net Railway Operating Income*
(Eastern Railroads)



*The change from a betterment to a depreciation accounting system in 1983 had the effect of increasing operating income.

SOURCE: Association of American Railroads, *Railroad Facts*, 1986 Edition (Washington, D.C., 1986), p. 17.

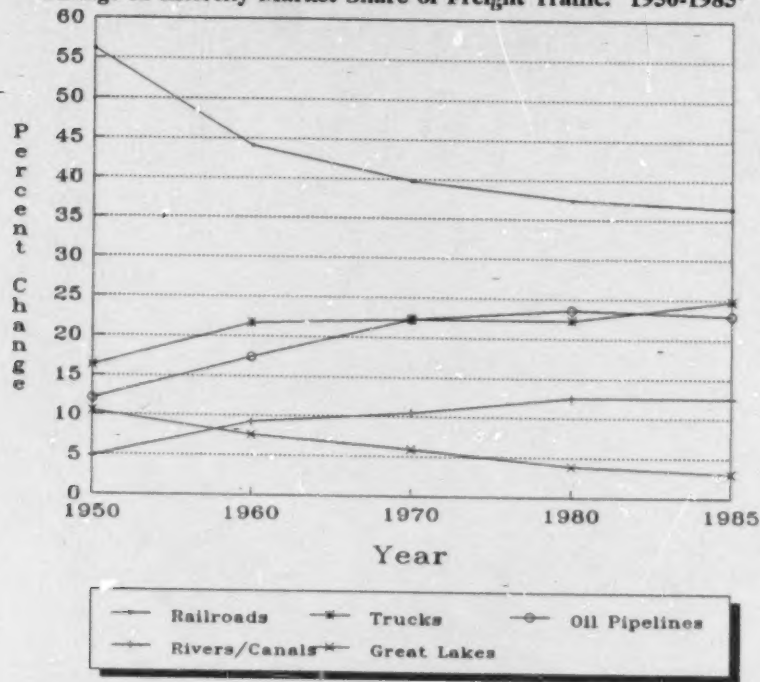
Competition with Other Modes

Railroads moved about 75 percent of intercity freight traffic in 1929, but their market share began plummeting in succeeding years, dropping to 56 percent in 1950, 44 percent in 1960, and 40 percent in 1970s. With minor variations, market share declined at a much slower rate during the 1980s and stands at about 36 percent (see Figures 2 and 3).⁷

⁷*Ibid.*, p. 32.

Figure 2

Change in Intercity Market Share of Freight Traffic: 1950-1985¹

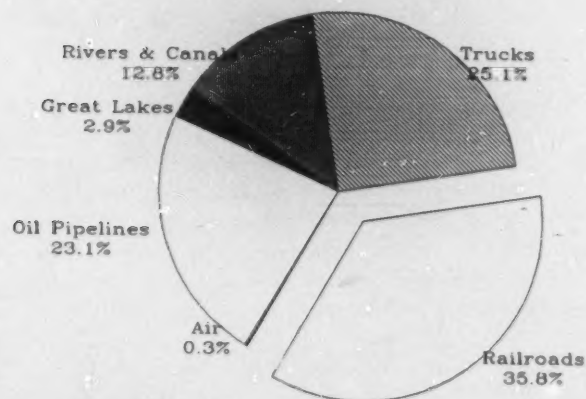


1. Based on revenue freight ton-miles. Air freight not shown because it is below 1 percent.

SOURCE: Association of American Railroads, *Railroad Facts*, 1987 Edition (Washington, D.C. 1987), p. 32.

Figure 3

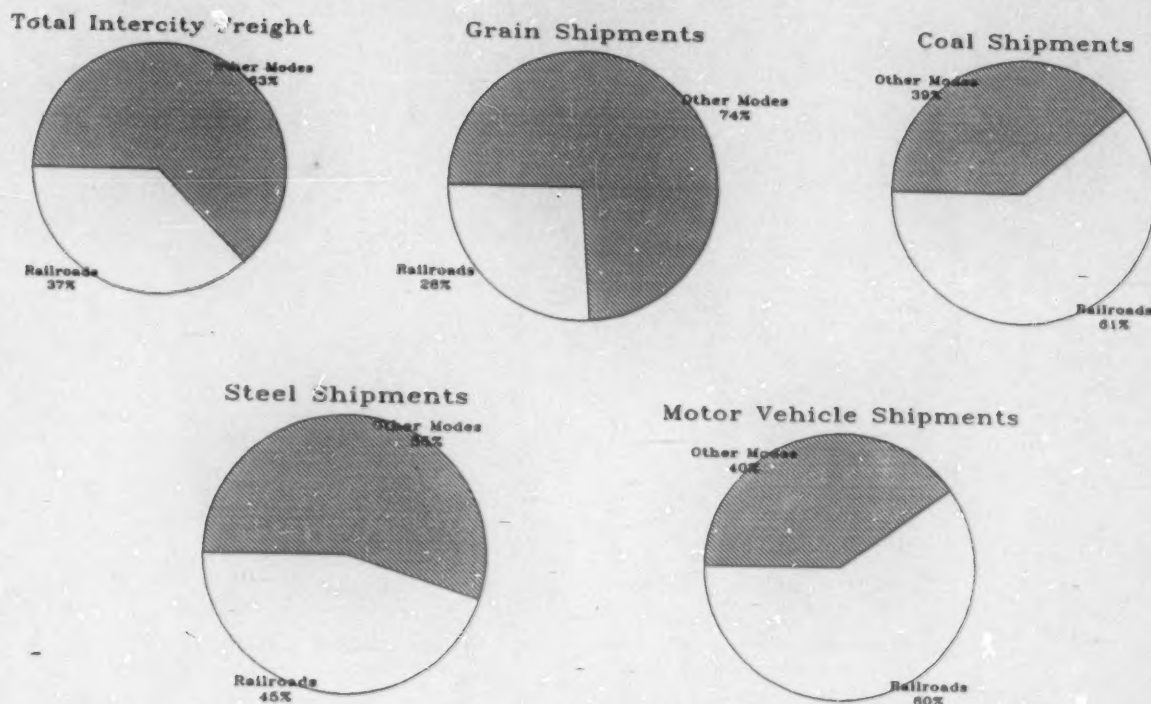
Market Share of Intercity Freight Traffic



1. Based on revenue freight ton-miles.

SOURCE: Association of America Railroads, *Railroad Facts*, 1987 Edition (Washington, D.C., 1987), p. 32.

Figure 4
1985 Railroad Market Shares



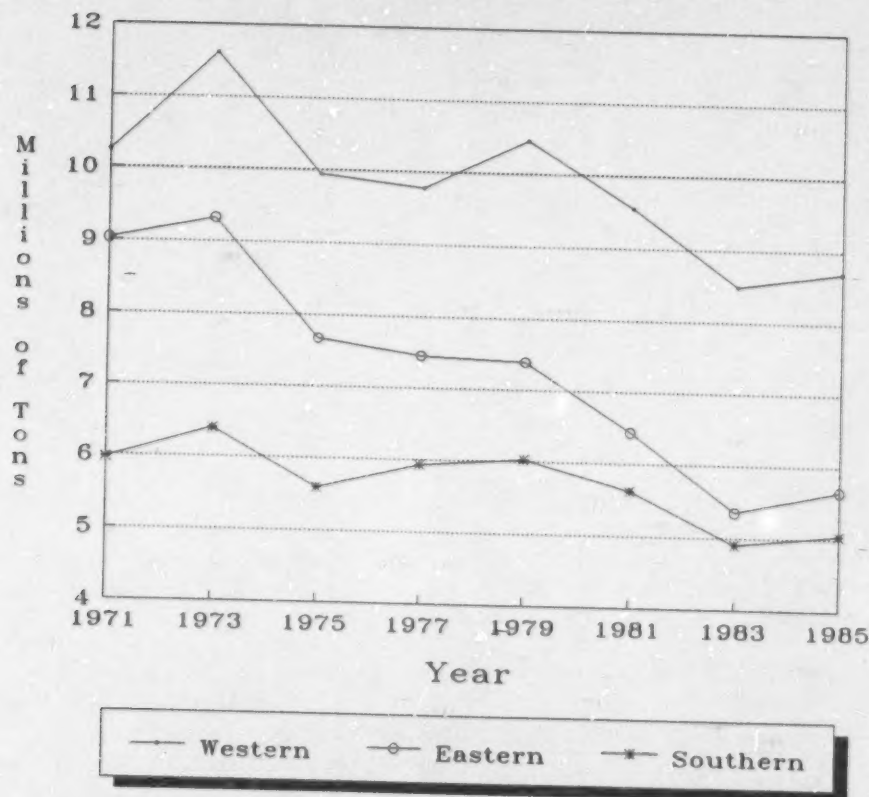
SOURCE: Robert W. Blanchette, *America's Railroads After Staggers: An Economic Prospectus* (Washington, D.C.: Association of American Railroads, 1987), p. 2.

In certain categories, such as the movement of containers and trailers, a modest shift from trucks back to rail occurred during this period. Some leaders of the industry have questioned whether rail carriers' investments in equipment to handle container/trailer traffic are justified in light of thin profit margins associated with this highly competitive business. Others defend the investments as necessary if the rail industry is to remain competitive at all.

Recent months have produced optimism in connection with transport of this type. After several years of stiff competition from a deregulated trucking industry that succeeded in reducing operating costs and which benefited from lower fuel prices, the competitive advantage now appears to be headed back to the rails. Trucking industry operating costs are on the rise. Railroad investments in equipment and operating practices that led to such innovations as "double-stack" and "run-through" trains are beginning to pay off. More flexible labor agreements also have helped rail carriers handle this traffic. However, efforts by the trucking industry to operate longer and heavier rigs, coupled with state taxes and permit fees remaining at levels that subsidize the trucking industry, would again reverse the trend.

The resurgent industrial economy of the Great Lakes states has produced additional traffic. As factory use increased during the prolonged economic recovery of the 1980s, rails were among the beneficiaries. The establishment of new automotive and steel-producing facilities in the Ohio Valley is bringing new customers (see Figures 4 and 5).

Figure 5
Revenue Carloading by Region - Major Railroads



SOURCE: Association of America Railroads, *Railroad Facts*, 1986 Edition (Washington, D.C., 1986), p. 24.

Regional Economic Trends

As a result of decentralization and relocation, the region's manufacturing center shifted from New England and the Mid-Atlantic states to the Great Lakes region during the 1920s and 1930s. The 1950s and 1960s saw another round of decentralization and a growing migration of industry to the Sunbelt. Competition from other regions intensified during the 1970s and 1980s, as did inroads from offshore manufacturers. However, the latter 1980s have produced evidence of manufacturing stabilization in the Northeast and Midwest generally, and a resurgence of traditional manufacturing in the Great Lakes states.

Railroad tonnage has been under considerable pressure during the post-war era. A combination of factors is involved: traffic erosion to other modes, finished goods that are lighter in weight--automobiles and housing components, for example--the substitution of plastics for metal, imports of finished goods, and slumping farm exports.

Originated Tonnage for Eastern Class I Railroads

Year	Millions of Tons
1973	527
1975	463
1977	439
1979	430
1981	397
1983	347
1985	360

SOURCE: Association of American Railroads, *Railroad Facts*, 1986 Edition (Washington, D.C., 1986), p. 27.

Figures of originations for Class I railroads understate the region's increasing volume of traffic originating on the short line and smaller regional railroads. Eastern railroads also are hauling greater volumes of coal originating on western systems and container traffic of foreign origin. Some of the latter is directed to consumer markets in the region; other shipments move as part of transcontinental "land-bridges" that compete with the Panama Canal.

In terms of key commodities, coal still accounts for 40 percent of tonnage for U.S. railroads. The postwar decline in anthracite-demand for home heating and commercial use, as coal was supplanted by natural gas and electricity, contributed to the decline of several failed railroads in the East. Demand for metallurgical coal has strengthened in recent years as the region's steelmakers recovered from the 1982-83 recession. Movement of steam coal to the region's electric utilities also is at brisk volumes, but increased use of low-sulphur western coal has reduced the demand for Ohio Valley coal.

Coal exports have been restrained in recent years by stiff competition from other producer nations. Production from Ohio Valley mines remains soft. While rail carriers anticipate recovery, if it fails to occur a few coal-hauling rail lines in Indiana and Illinois would be in jeopardy.

Metal shipments were quite strong in 1986 and 1987, with Conrail reporting a 28 percent increase in 1987.⁸ Although steel production in western Pennsylvania was decimated during the 1970s and early 1980s, the region's production has stabilized through relocation to the Lake Michigan south shoreline and the establishment of a number of mini-mills in Ohio, Indiana, and Illinois.

Grain from the Ohio Valley historically moved by rail to export markets via the mid-Atlantic ports, but in recent years grain harvests have shifted to livestock markets in the Southeast, where they now feed the poultry that appears on menus at thousands of fast-food restaurants nationwide. Current prospects for grain shipments are somewhat uncertain as midwesterners worry about the effects of the recent severe drought. The railroads, however, will continue to profit from the clearing out of surpluses accumulated at elevators in 1985 and 1986. Export prospects are blurry, with recent reports that the Soviet Union's harvest may be better than anticipated, while India may again become a buyer.

Automotive shipments also remain at high levels and consumer demand continues to flourish. The region's auto production suffered in the 1970s and 1980s as a consequence of stiff competition from abroad, recession at home, and a relocation of some auto assembly capacity to the Sunbelt. The relocation was

⁸Consolidated Rail Corporation, *1987 Annual Report* (Washington, D.C., 1987), p. 3.

unavoidable because an important variable in siting an assembly plant is the transportation cost of moving finished products to consumer markets. Population shifts to the Sunbelt forced the manufacturers to adjust production locales. However, in recent years both domestic and Japanese automakers have made extensive investments in new assembly facilities in Pennsylvania, Ohio, Indiana, and Illinois. The region seems assured of an important continuing role in world auto production.

Marketing

The eastern rail industry's approach to marketing has undergone a transformation that is nothing short of dramatic. Deregulation is an obvious contributor. The Staggers Act gave the carriers both incentives and the freedom to experiment with innovations in marketing, pricing, and service. The proliferation of contract rates since the enactment of the Staggers Act in 1980 has brought improvements in service, greater predictability to the economic results, and an increased likelihood of more capital investment by the carriers. Railroad industrial development specialists are more active than at any time since the 1960s.

Service innovations--shorter and faster "dedicated" trains, double-stacks, the land bridge, or run-through operations in which unit trains transfer from one railroad to another without delays in yard reclassification or changing engines--have enabled the railroads to preserve existing traffic and compete with trucks for new business. Railroad marketing departments have a far better grasp of the economics of the particular commodities and are better able to price them competitively.

The emergence of CSX Corporation as an integrated transportation company, offering rail, barge, ocean container, truck, and pipeline transportation, is being watched closely. Integration offers several marketing advantages; it extends the reach of service and expedites the coordination of multimodal shipments. It should bring stepped-up investments in transfer facilities--which for many years were costly bottlenecks in the transportation industry. Critics, however, worry over the concentration of transportation capacity under a single corporate umbrella, fearing that it will lead to monopoly. Norfolk Southern also has embraced the integrated approach, but to a lesser extent. Newly privatized Conrail has yet to proceed with acquisitions in other modes, preferring to develop cooperative arrangements in lieu thereof. However, the railroad is accumulating surplus cash, which it could use to make acquisitions in water, truck, or rail transport.

Specialized bulk transfer points for commodities such as steel, lumber, and chemicals have been expanded. These facilities have made railroads more competitive in transporting these high-value goods. However, railroad operating departments are facing a stiff challenge in controlling costs associated with this more responsive and shipper-specific service. Although incremental revenues are increasing, so are incremental costs.

Route Abandonments

As noted in the preceding section, disinvestment has been a key element of railroad policy since the late 1950s. Railroads have gradually liquidated segments of their systems or sold rail property to short line companies. The aim was to consolidate diminishing tonnage on main lines and rid themselves of unprofitable branch lines (see Figure 6). This approach has been controversial. Shippers and state and local agencies have resisted most attempts of rail companies to abandon routes. However, a significant number of abandonments occurred during the 1970s and early 1980s.

Class I Railroad Mileage by State: 1986

	1972	1986
Illinois	10,822	7,960
Indiana	6,405	4,813
Massachusetts	1,430	1,079
Michigan	6,159	3,451
New Jersey	1,742	1,194
New York	5,595	3,453
Ohio	7,804	6,102
Pennsylvania	8,273	5,113

SOURCES: U.S. Department of Transportation, *Rail Service in the Midwest and Northeast Region*, vol. 1 (Washington, D.C.: U.S. Government Printing Office, February 1984), p. 3; and Association of American Railroads, *Railroad Facts*, 1987 Edition (Washington, D.C., 1987), p. 43.

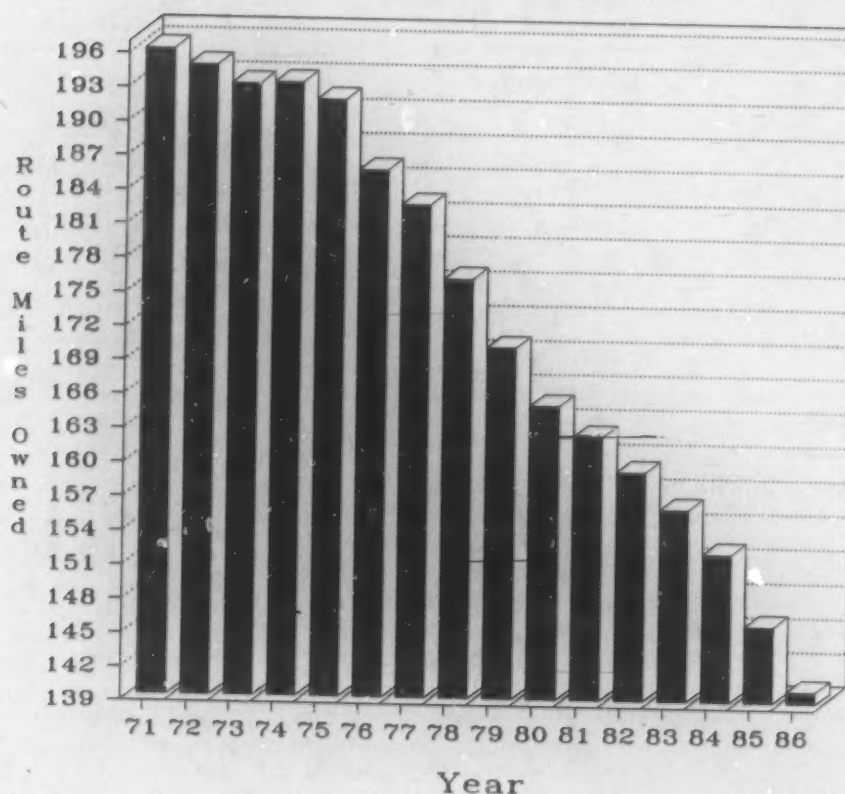
In many cases shippers were furious because they blamed declining carloadings on railroads that provided such poor service that they were forced into truck shipments. A common complaint from bulk rail shippers involved either shortages of hopper cars or their unavailability at key times. This complaint had validity. However, it also became apparent to analysts during the restructuring of the bankrupt companies that some shippers' interest in preserving local rail access centered on maintaining the railroad's presence as a competitive damper on the rates of truckers they already had switched to. Unquestionably shippers got value from maintaining competitive choices, but it was a poor bargain for railroads that were not getting the business but were helping to keep truck rates lower.

Some rural branch lines failed because of the shift from a large number of country grain elevators dotting the landscape to fewer and larger regional elevators that benefitted from cheaper rates of multiple railcar shipment or unit trains. Railroads contributed to this shrinkage by rate actions designed to encourage multiple-car shipments, but economies of scale favored them anyway. Abandonment of these rural lines may not have materially altered the trend to regional grain gathering. The small country elevator was vanishing during the 1960s and 1970s. Rail abandonments may only have hastened the trend.

The overall process also reflected the legacy of a bygone era in which the American railroad occupied a unique and almost mystical niche in the nation's life. For a small town, the loss of a branch line or passenger service—even if it was used seldom or not at all—symbolized the removal of the locality from the main line of commerce and economic development. Local officials argued frequently that, although existing

Figure 6

Class I Railroads Route Miles Owned: 1971-1986¹
(in thousands)



1. Route miles represent the aggregate length of roadway. It does not include sidings, yard tracks, or multiple main line track miles.

SOURCE: Association of American Railroads, *Railroad Facts*, 1987 Edition (Washington, D.C. 1987), p. 42.

branch lines were little-used, their retention was essential if the community were to have any hope of future industrial development.

In theory, this view had merit. In practical terms, it was questionable. Because railroads are high-volume transporters of goods, they are not the mode of choice of many small manufacturers. Yet only a limited number of small towns can offer the labor force, infrastructure, or amenities required to attract rail-using industries unless special circumstances prevail. Where large-scale industry has located near smaller cities, it has tended to be in proximity to both railroad main lines and interstate highways. Freight railroads serve shippers, not towns, in any case.

Some measure of the overbuilt nature of the regional rail network can be gauged from analyses undertaken during the mid-1970s in connection with the rescue effort involving the bankrupt lines. A study prepared for the Indiana governor's office in 1974 identified 500 miles of Hoosier state branch lines that were not worth saving. About half of the mileage already was out of service. Only a handful of shipper

complaints resulted.⁹ The "Final System Plan" for Conrail drafted by the United States Railway Association (USRA) called for the exclusion of about 30 percent of the route mileage of the bankrupt railroads, but noted that these lines carried only 2.2 percent of traffic.¹⁰

When it became apparent that a significant number of abandonments would occur, shippers and entrepreneurs moved to establish short line railroads, often with state subsidies for operations or rehabilitation. While a number of these lines prospered, others failed because the traffic base was as bad as or worse than that outlined in the USRA plan.

States and localities made efforts--successful in certain cases--to preserve the abandoned rights of way. Their potential use as recreational trails, utility and pipeline corridors, or "banking" for ultimate reopening as rail service routes were the most common objectives. Results were not on a scale most state and local planners had hoped for. Legal questions of land ownership were complex, and in some cases titles had reversion clauses if lines ceased to be used for transportation purposes. In rural areas farmers cut through grade separations to get easier access to fields on the other side. Local highway departments paved over them. Bridges were removed, which reduced a line's potential as a recreational corridor and made less likely any future reopening for rail purposes.

Railroad "rationalization" programs now are shifting to a different emphasis. With many of the branch lines already abandoned or transferred to short-line railroads, the effort has turned to redundant main lines and marginally profitable secondaries. It reflects the carriers' attempts to consolidate traffic on a limited number of core lines in their systems. This approach has a more favorable impact upon railroad balance sheets because it lowers future capital investment, reduces maintenance costs, and repositions valuable main line rail and crossties on surviving routes while retaining most carloadings in the core system.

If current and projected rationalization programs are any less controversial than branch-line abandonments of the 1970s, the difference will result from the railroads' greater care in transferring many of them to short-line and regional railroad managements. However, this change will not eliminate controversy because a number of candidate routes have few on-line shippers, which reduces their business potential. They serve mainly as conduits for "through" traffic between larger markets. As through traffic is diverted to other main lines, the sparse local traffic remaining is insufficient to sustain them--especially if the routes have been built and maintained to main-line standards.

If predecessor railroads had succeeded in even modest levels of rationalization in the 1960s, they could have made the overall process far more orderly. The merger of New York Central and Pennsylvania, for example, created several parallel main lines. Elimination of redundancy had been a key pro-merger argument, which did not take place for a variety of reasons. Since that time a series of mega-mergers have occurred, yet the new companies have been reluctant to embark upon streamlining their systems. They did not want to repeat Penn Central's mistakes or were so occupied with polishing off other aspects of merging operations that system reconfiguration was put on hold.

As a result of merging Chesapeake & Ohio, Baltimore & Ohio, and Louisville & Nashville, CSX until recently operated four main lines from Chicago to the Ohio River between Evansville and Cincinnati. It has dismembered one line, and the south end of the former Monon line is a likely candidate for divestiture to a regional railroad. Only recently has Norfolk Southern begun to deal with the route duplications created by its control since the 1960s of the Wabash and Nickel Plate systems between Lake Erie and St. Louis. The Wabash main line seems secure. Portions of the Nickel Plate route have been abandoned. Other segments now are operated by shipper-led organizations. Still others are in negotiation for lease to new operators.

⁹Indiana University Center for Urban and Regional Analysis, *U.S.R.A. Segments in Indiana: State Analysis and Recommendations* (Bloomington, Ind., August 20, 1974), vol. I, pp. 15-62.

¹⁰United States Railway Association, *Final System Plan* (Washington, D.C.: U.S. Government Printing Office, July 26, 1975), vol. I, p. 11.

CSX, which operates 21,600 miles in the East and South, is aiming for a 15,000-mile core system. Norfolk Southern has identified 2,700 miles of routes for some form of divestiture. Conrail has had less to say about system reduction. This is understandable, given the level of federal investment in route rehabilitation and its recent privatization. Conrail has identified about 200 miles--most of it in Illinois and Indiana--for sale or abandonment. Many analysts believe that Conrail eventually will trim its system in the Northeast and Midwest to about 10,000 miles from today's 13,000.

A positive feature of railroad activities is the willingness of the larger companies to spin off surplus routes to short-line and regional railroads. NS, in particular, sees these operations as better able to continue to provide local shipper service while continuing to feed traffic to its main lines. This is in sharp contrast to railroad policy in the 1960s and 1970s, which aggressively pursued outright abandonment rather than giving the traffic to another railroad.

A matter of concern to state and local officials, however, is the industry practice of undertaking "segmented" abandonments. Usually this means the railroad files an abandonment petition for a section of track in the middle of a downgraded main line on which there are no shippers. Railroads are able to accomplish such abandonments under a special provision of the Staggers Act, which provides for expedited handling and exemptions from normal Interstate Commerce Commission (ICC) jurisdiction. Conrail was granted a temporary abandonment authority under provisions of the Northeast Rail Service Act of 1981.

Once these main lines are broken, it becomes easier to abandon additional segments. Meanwhile, the process has rendered impossible any attempt by shippers or other interests to establish regional railroads with traffic flowing between major market end points, or to continue to provide local shippers with competitive connections. From the viewpoint of the states, segmented abandonments are an objectionable feature of current railroad strategy.

In the 1980s state and local officials have changed their strategies of response to railroad divestitures and abandonments. Because it is more difficult to block these actions and because federal law requires railroads to offer petitioned lines to new operators, state and local governments have concentrated their efforts on promoting acquisitions of needed but abandoned lines by short-line and regional railroads. Occasionally they offer financial aid for purchase and rehabilitation.¹¹

Proposed legislation in Congress would amend the Staggers Act to impose tighter restrictions on railroad abandonments. Railroads would not be allowed to refile abandonment petitions for a one-year period after a prior petition was denied, local hearings would be required if protesting interests demanded them, and line-specific financial data would be used in ICC determinations of abandonment cases. Senate committee action on these proposals was scheduled tentatively, but appeared to be tied to progress on revisions to the Staggers Act.¹²

A final concern of the states relates to the extent to which the Class I carriers will trim their systems. While many officials would concede that the rail network still has unproductive excess capacity, wholesale elimination of parallel routes creates new problems. The risk of system disruption as a result of floods, bridge failures, and the like has increased as the number of alternative routings has diminished. The possibility of more route reduction poses a special problem to intercity rail passenger operations. The National Railroad Passenger Corporation (Amtrak) already has been compelled to make certain route changes as the result of abandonments or divestitures by freight railroads on whose lines it operates.

¹¹Abandonment procedures are covered in CFR Title 49, Part 1152. A useful guide for the lay person is the Illinois Department of Transportation's booklet, "Railroad Abandonments," Springfield, Ill., 1986. A detailed discussion of state rail preservation and options is William R. Black and James F. Runke, *The States and Rural Rail Preservation: Alternative Strategies*, Lexington, Ky.: Council of State Governments, 1975.

¹²See S. 676, 100th Congress 1st Session.

Additional route changes probably will be forced upon it. These developments threaten continued service to intermediate markets between big-city endpoints where an alternate main-line route option is not feasible. Yet Amtrak cannot afford to pay for the levels of maintenance required to continue passenger operations over the jeopardized routes for only one or two passenger trains a day.

Short Line and Regional Carriers

When the restructuring of the eastern bankrupt railroads took place in the mid-1970s, about one-third of their route mileage was not destined to find a home in Conrail. Meanwhile, other railroads in the Northeast and Midwest were abandoning branch lines selectively. Many observers harbored the hope that most lines could be preserved through acquisition and operation by entrepreneurs, shippers, or state and local governments. Numerous undertakings of this type did occur, but the result was less substantial than anticipated.

Several states created funds for acquisition and/or rehabilitation. Laws were enacted to speed the establishment of special local authorities empowered to buy and operate short lines. Normally, they were built around a combination of shippers and local economic development agencies. A few states, such as Michigan, embarked upon ambitious programs of state acquisition of branch lines.

Although a number of small railroads were operated successfully, others failed. Branch lines had lost so much traffic that they no longer made any economic sense, or track and equipment conditions had become so deteriorated that it was impossible to turn them around—even with public assistance for rehabilitation. Shippers found themselves operating in an unfamiliar business environment and lacked the expertise to succeed. Several properties were managed by people best described as rail buffs whose real love was operating trains, but who lacked business savvy. Others were started on the assumption that new owners would do a far better job of marketing than the predecessor carriers. The traffic base on which many began operations was not sufficient, and they did not always succeed.

While many small railroads survived for several years, they failed when a major shipper ceased operations or diverted to truck transportation. New operators had difficulties negotiating adequate divisions of revenue with connecting Class I railroads; they also were hampered by the nature of traffic movements. In calculating revenue divisions, shippers traditionally paid a premium to the line on which the traffic originated. Rural short lines often depended upon inbound traffic (such as agricultural chemicals) that provided a minimal share of revenues. Several lacked connections to more than one carrier, which reduced their competitiveness. Others were limited to a traffic base of grain or other low-rate commodities that offered inadequate financial returns to fund maintenance or debt service. Finally, many of these operations were undercapitalized to begin with, were starved for operating cash, and lacked financial resources to tide them over economic downturns. Conventional financing was difficult to obtain for this type of business.¹³

Generally, the successful operations resulted from strong hands-on management, a stable traffic base, commitment by one or two key shippers to provide minimum traffic or revenue guarantees, a bare-bones operating plan, and low-cost financing or outright grants by states for acquisition and rehabilitation.

The situation in the 1980s has taken a turn for the better. In addition to the continuing establishment of short-line railroads, this decade has seen the evolution of several regional railroads, carved out of divestitures of trunkline systems—notably the former routes of the Illinois Central Gulf, Rock Island, Chicago & Northwestern, and Burlington Northern.

A precise definition of *short-line* or *regional railroad* is lacking. The Association of American Railroads defines a regional as having either revenues over \$40 million (but below the "Class I" threshold of about \$89 million), or a minimum of 350 route miles. Regionals typically operate in more than one state. One

¹³See John F. Due, *The Causes of Failure of Small and Regional Railroads* (Champaign, Ill.: Bureau of Economic and Business Research, 1987).

might polish the definition by adding that regional railroads normally have connections with several other railroads, are not reliant upon one or two shippers, and do not depend upon one commodity (particularly grain) for their viability. A short-line route is smaller, may have only one or two connecting outlets, and counts on a few shippers for its traffic volume.¹⁴

Nationwide, 179 new railroads were created between 1980 and the autumn of 1987. They operate 17,533 route miles. The majority represent the efforts of short-line entrepreneurs, but about 10 percent are owned by shippers in tandem with state or local governments. The Northeast and Midwest have gained the largest number of short lines and regionals. Pennsylvania has 20 new railroads, Indiana 13, Ohio 12, and Illinois 11. Of the total, 145 of the new railroads operate within one state, 34 in two states, eight in three states, and two have systems encompassing four states.

Of the 27 railroads that qualify as regional carriers, 12 have been in business for many years. Six other regional railroads were created between 1973 and 1984, generally from properties made available after the restructuring of the eastern bankrupts into Conrail. Nine regional carriers have formed since 1985, most of them in the East, Midwest, and South.¹⁵

Is the regional railroad phenomenon a flourishing trend or only a temporary boomlet? Although many in the rail industry believe that these operations represent the only way to preserve rail service on many former main-line and secondary routings, forecasts are somewhat mixed. The spinoff of trunkline routes to regional carriers has unleashed a torrent of controversy over labor issues. A few noteworthy failures have occurred among regional ventures. The standout example is the recent receivership of the Chicago, Missouri & Western, which was created in 1987 from former lines of the Illinois Central Gulf between Chicago, St. Louis, and Kansas City. Although the extent and causes of the CM&W's problems are not yet fully understood, its circumstances highlight some of the obstacles that regional carriers must overcome to prosper.

Purchase Price

Unlike the situation a decade when properties changing hands represented light traffic volume and worn-out trackage acquired for little more than scrap value, the entry price for a new railroad operator has climbed. Higher sale prices are due in part to the changing nature of rail lines available for purchase. Often, trackage is heavier-weight rail, sometimes continuous welded rail. The selling railroad could reposition this quality rail elsewhere on its system easily and thereby reduce its purchases of new material. The "relay" value of track and crosstie hardware can amount to \$75,000 to \$100,000 per mile. A new operator cannot justify this investment merely to move seasonal grain. This situation represents a formidable obstacle to preservation of certain rail lines.

Prices also are higher because railroads are hard bargainers, and some new owners have paid extravagant prices. CM&W, for example, paid \$81 million for its 631-mile acquisition. This price included a variety of other facilities and rolling stock, but represented a premium payment for a route system that fell short of being high-quality railway, especially the badly deteriorated line from Kansas City to western Illinois. The company's business plan called for an average investment of more than \$40,000 per mile to rehabilitate the system. The combined outlay represented an expensive railroad indeed.

One alternative to outright purchase is leasing. Norfolk Southern currently is testing this concept in negotiations for lines it plans to divest. The acquiring railroad would lease routes, but get a credit against the lease payment (and eventual purchase) by feeding Norfolk Southern agreed-upon volumes of traffic originating on the new railroad. This is advantageous to the acquiring carrier because it permits low-cost

¹⁴"Regional Railroad Planner's Guide," *Railway Age*, May, 1988.

¹⁵"Face-lift of U.S. Rail System is Far More Than Merely Cosmetic," *Traffic World*, February 15, 1988, p. 15.

entry into the business, and aids the large railroad by preserving connecting traffic and revenues for its system. It also renders feasible transactions that otherwise might be resolved through abandonment. However, by providing a powerful incentive to continue to interchange traffic with the lessor, it diminishes the competitive potential that may exist by means of connections with other railroads.

Labor Costs

The new regional and short-line railroads either are nonunion or operate under union contracts that offer them greater flexibility in terms of reduced crew sizes, hourly based rather than mileage-based compensation, elimination of special pay for certain types of work, and the like. These concessions have spurred controversy. Labor officials have described sales by trunkline carriers to short lines and regionals as "union busting." However, few of the new, smaller railroads could survive if compelled to operate within the costs and work-rule constraints of the contracts applicable to Class I railroads.

Small railroads can build their traffic base by providing highly responsive service to shippers, usually more frequent trains or switching operations. These services are feasible only with flexible work rules and smaller crews. In an industry in which labor costs represent a significant portion of total operating costs, saving money on personnel is one of the few factors that can substantially improve the bottom line. Many other costs are relatively fixed, and cannot be reduced below certain levels. High personnel costs are especially troublesome during periods of economic downturn, when maintenance and debt service expenditures remain fixed, but revenue declines.

Labor Protection

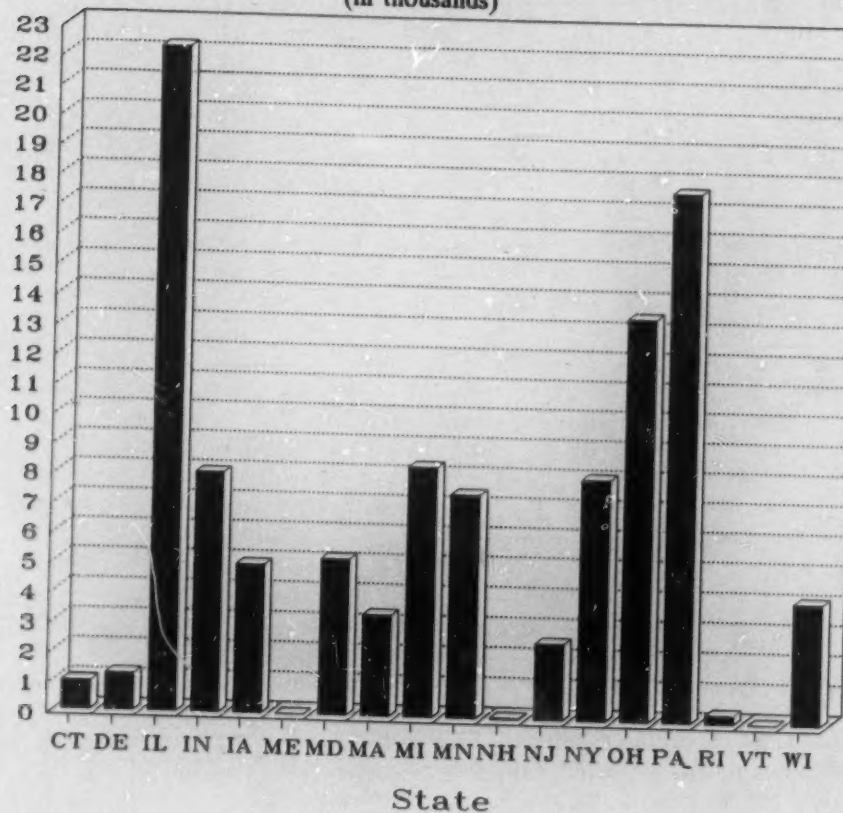
Railroads and public transit operations incur a level of "severance" costs that is unique in the U.S. business system. The cost of abolishing a job can amount to \$200,000 if so-called "New York Dock" settlement provisions are applied. (They provide for six years of continued pay and benefits for affected employees.) These requirements result from several circumstances, including a long history of bitter confrontations between railroad management and labor, political power of unions, and the stringent regulatory environment in which railroads once operated. Another factor is the willingness of former railroad managements to yield to labor-protection pressures in order to win a bigger prize--divesting themselves of money-losing routes and business. In recent years many "buyouts" or permanent layoffs have involved lump-sum settlements far below the "New York Dock" level. Management and labor have negotiated other work force reductions through attrition.

Labor protection agreements will affect the future of regional carriers. At present labor demands are the main obstacle to completing a number of transactions. Rail labor has taken the position that these line sales are designed to circumvent collective-bargaining agreements. Labor won a federal court ruling affecting the proposed sale of the Pittsburgh & Lake Erie Railroad (P&LE). If sustained, railroads would be compelled to negotiate agreements over force reductions associated with these restructurings. In a separate case, however, another federal court has limited the applicability of the relevant federal rail labor statute in a way that may indicate that all but the largest-line sales could proceed (see Figure 7).

The P&LE problem may be resolved through an agreement between CSX and the Railway Labor Executives Association for CSX to finance the acquisition by a new company to be owned by P&LE employees. Several other proposed transactions are stalled until the legal situation involving labor protection is resolved; labor costs could be the deal-breakers. Sale of the Toledo, Peoria & Western (Illinois and Indiana), Chicago & Northwestern line groupings in Wisconsin and Michigan, and Buffalo & Pittsburgh (New York and Pennsylvania) has been affected by the controversy.¹⁶ However, a recent federal court ruling favorable to the railroads may allow the Buffalo & Pittsburgh to proceed.

¹⁶U.S. Supreme Court Likely to Review Rail Line Sales," *Traffic World*, June 6, 1988, p. 10.

Figure 7
Class I and Amtrak Railroad Employment by State^{1, 2}
 (in thousands)



1. Figures are based on the location of the employee's pay delivery point, which could be different from state of residence.
2. Due to the caveat noted above, plus the fact that several of their railroads are short lines and regionals whose employment is not included in these numbers, the totals for Maine, New Hampshire, and Vermont are understated.

SOURCE: Association of American Railroads, *Railroad Facts*, 1987 Edition, (Washington, D.C., 1987), p. 58.

Delay intensifies concerns about the future of these lines. Buyers may withdraw from negotiations. Having identified these lines for sale, selling railroads have ceased the aggressive pursuit of business on them, railroad industrial development departments have written them off, and only the most urgent maintenance needs are being undertaken. If delays are prolonged, these lines may deteriorate to a point that rehabilitation becomes too costly for the acquirer, or traffic declines have rendered them uneconomic.¹⁷ Moreover, if labor protection remains an obstacle, railroad strategy on future divestitures will change. Rail companies will not pursue the sale option as aggressively and will be more likely to abandon useful lines.

¹⁷Daniel Machalaba, "Sales of Short-Line Railroads Spread, Stall." *Wall Street Journal*, June 3, 1988, p. 8.

Traffic Base

The main reason that large railroads sell lines to regional carriers is the belief that new operators can profit by providing service at lower cost. However, some sell because they have concluded that the existing traffic base is not sufficient to justify future capital investment. Certain lines functioned mainly as conduits of long-haul "overhead" traffic that did not originate or terminate on them. Once this through traffic is rerouted to other main lines, these conduits may be superfluous.

These circumstances require a hard look by prospective operators at the realities of the traffic base. The Chicago, Missouri & Western (CM&W) provides an example. The acquirer, Venango River Corp., knew that there was little on-line traffic west of the Mississippi River, but counted on a hefty volume of interchange traffic at the Kansas City gateway to justify purchase of the route through Missouri. Management assumed that 80 percent of existing interchange traffic would continue to flow over the CM&W to St. Louis or Chicago. A consultant study had determined that more than 50 percent might be diverted. Results were more in line with the consultant's expectations and contributed to the railroad's misfortunes.¹⁸

For some of these enterprises to succeed, the selling railroad must be willing to sell "enough" trackage to assure access to major gateways and big-city markets. Naturally, the divesting railroad does not want to create a competitor, but looks at the new regional carrier as a feeder to its system. Nevertheless, the new operator cannot be put in a circumstance in which a business cycle downturn proves fatal. Class I carriers have resorted to sweetening the deals by offering enough for sale to assure multiple and competitive connections and a diversified traffic base.

¹⁸Prescott, Ball & Turben Inc., "Venango Railroad Corp. Private Placement Memorandum," October 1986, pp. 46-48.

Rail Deregulation

Prior to the fashioning of an intercity highway network in the 1920s and 1930s, railroads held a monopoly on intercity freight that could not be moved from origin to destination on the nation's navigable waterways. Abuse of that monopoly power was commonplace in those times. It produced a long and troubling history of shipper protests and ill-will. It also led to eventual government regulation of the railroads, initially through the Interstate Commerce Act of 1887, and then refined through the Elkins (1903), Hepburn (1906), Mann-Elkins (1910), and Clayton (1914) Acts.

For much of the twentieth century, railroads operated under rather stringent regulatory supervision of their rates and services. It was not until the 1970s, as the federal government began grappling with the restructuring of eastern bankrupt railroads and as industry leaders wondered if the rail system could avoid nationalization that serious attention was given to the economic plight of the carriers.

The results of these deliberations became the preamble to the Staggers Rail Act. Among the findings of Congress were the following.

- Most transportation within the United States was competitive and nearly two-thirds of intercity freight moved by nonrail modes.
- Many government regulations affecting railroads had become unnecessary and inefficient.
- Industry earnings were the lowest of any transportation mode and insufficient to generate funds for capital improvements; both produced an unfinanced capital requirement of \$16 to \$20 billion by 1985.
- Failure to increase industry earnings would produce either further deterioration or the need for additional federal subsidy.¹⁹

The Staggers Act made several important changes to the way railroads are regulated.

- A *market dominance* standard was to be used as a test for determining the reasonableness of rates.
- *Revenue adequacy* of railroads was to be considered in rate determinations.
- *Contract rates* could be negotiated between carriers and individual shippers.
- Rates were *presumed reasonable* if they produced a ratio of revenues to variable costs within limits set by the law.
- *Special rate relief*, amounting to 6 percent annually over the inflation rate for the first four years, and 4 percent annually thereafter, was allowed.²⁰

A majority of analysts would agree that the changes brought about by the Staggers Act improved industry profitability, stimulated capital investment, allowed railroads to pursue marketing and pricing opportunities previously denied them, and in general brought a more realistic "marketplace" orientation to

¹⁹Staggers Rail Act of 1980, PL 96-448, 94 Stat. 1895.

²⁰*Ibid.*

the economics of rail transport. Because of competition, railroads have not fully used the ratemaking flexibility afforded them by the law. The industry maintains that when inflation adjustments are taken into account, overall rail rates have declined during the post-Staggers era. Most volume grain and coal shipments now move under contract rates. Average revenue per ton-mile, expressed in constant dollars, declined 25 percent for coal shipments and 44 percent for grain shipments during the 1980-1986 period.²¹

However, the law has not ended controversies. While many shippers--manufacturers, distributors, and large-volume grain elevators--generally are satisfied with the operation of the law, certain others--coal producers, electric utilities, low-volume grain shippers, and smaller railroads--have registered complaints. These disagreements have led to proposals ranging from what might be characterized as "fine-tuning" of Staggers to reregulation, depending upon the point of view.

Although legislative initiatives gained momentum in 1986 and early 1987, they stalled in 1988. Negotiation between shipper groups and railroads has resolved some of the disputes. One industry association, the National Industrial Traffic League, earlier had embraced ambitious legislative approaches, but since has narrowed the scope of changes it seeks. While Staggers revisions (in the form of S. 676) were headed for mark-up in the Senate Commerce, Science and Transportation Committee, there was doubt that the House Energy and Commerce Committee would proceed with a subcommittee version of H.R. 1393.

The original sticking points centered on the following controversies.

Cancellation of Joint Rates. These rates are agreed to by multiple rail carriers for a single billing to cover costs of a commodity movement over more than one railroad, and include switching and transfer charges. After the enactment of Staggers, many joint rates were cancelled because one of the participating railroads concluded that its share of revenue was not compensatory given the costs it incurred.

Market Dominance. Disputes have arisen as to how it should be calculated, and whether other factors such as geographical competition, or competition at either origin or destination should be included. Legislative proposals would shift the burden of proof from shipper to railroad in market dominance cases adjudicated by the ICC. Moreover, they would preclude the ICC from considering geographic or product competition in these matters, which railroads deem essential to an objective review.

Reciprocal Switching. Under this arrangement, where two or more railroads share a common terminal point, one of them agrees to switch cars for the other carrier or carriers. The reasonableness of reciprocal switching charges and the accounting methodology used to determine compensation are in dispute. The main concern is that rail carriers have cancelled several of these agreements.

Revenue Adequacy. This is a key rate-reasonableness test under the Staggers Act. Critics have challenged the ICC methodology used to determine the cost of capital. Others have assailed the whole concept, asserting that growing cash surpluses that have enabled railroads to make acquisitions in other modes have demonstrated that they are getting a fair rate of return.²² Railroads argue that even under existing conditions they do not earn a return equal to the cost of capital.

Competitive Access. In response to complaints by coal and utility shippers, who deem themselves captive to the railroad that serves their origins and destinations, legislative proposals have included the concept of mandated competitive access. Upon petition by a shipper, receiver, or another railroad, a railroad owning the line that serves a shipping or receiving point directly would be required to open it to another carrier if the ICC determines it necessary to maintain competition.

²¹See "Big Grain Shippers Like Rail Contracts," *Traffic World*, January 5, 1987, p. 10; also Robert W. Blanchette, *America's Railroads After Staggers* (Washington, D.C.: Association of American Railroads, 1987), p. 12; also "Big Grain Shippers Give High Marks to Rail Rates Formed Under Staggers," *Traffic World*, January 5, 1987, p. 10.

²²"I.C.C. Rail Revenue Finding Upsets Two Key Lawmakers," *Traffic World*, March 23, 1987, p. 5.

Behind-the-scenes negotiation has resolved or reduced differences in a number of these areas. Recent pronouncements, such as those by CSX President John W. Snow, suggest that further progress is possible over the issues of market dominance and geographical competition. The competitive access issue, however, does not lend itself to compromise.²³

Coal and utility "captive shippers" consider this provision important to protect them against rate increases they consider unjustified. Railroad managements are fundamentally opposed to the competitive access provision. They believe that it amounts to an unconstitutional taking of property and strongly dispute the formula that would be used to compensate the owning railroad. Competitive access, in their view, is a form of reregulation that is intended to force rates below market levels. This dispute alone may not generate enough political momentum to force amendments to the Staggers Act.²⁴

Sorting out specific implications of "fine-tuning" or "reregulation" is difficult because one can find an accounting methodology to support most of the contrary points of view. Clearly, any legislation that included competitive access would face a constitutional challenge. Nonetheless, certain trends seem apparent if one focuses on the economics rather than the politics of the controversy.

While railroads in the Northeast and Midwest are producing profits, they still fall short of rates of return for U.S. industry generally. Rail managements' computations of returns on capital investments suggest that further erosion of rates of return would cause a rethinking of the prudence of these investments. As they analyze the impact of the competitive access concept, management sees only reduced revenues, either as the result of rate-cutting required to retain traffic or as lost revenues as traffic is diverted to a competitor.

Given the industry priority to concentrate traffic on core main lines, plus the threat of traffic diversion inherent in the competitive-access proposals, one is hard pressed to believe that rail companies would continue to invest in line segments vulnerable to ICC-mandated competitive access. Earlier evaluations of rail regulation after the Hepburn, Mann-Elkins, and Clayton Acts suggest that disinvestment was one of the results.²⁵ Certainly, the erosion of traffic--both real and threatened--stimulated disinvestment during the 1950s, 1960s, and 1970s. It is difficult to imagine that railroads would react differently now.

Furthermore, while railroads have accumulated cash reserves in recent years (and this pattern prevails for the big three eastern carriers), these corporations are not obliged to reinvest them in rail operations offering marginal or negative rates of return. The diversification already completed proves the point. Several of the larger companies--CSX, Burlington Northern, Norfolk Southern, and Santa Fe Southern Pacific--have nonrail units generating higher rates of return on investment than their rail components.

Substantive amendments to the Staggers Act would send a message that is both real and symbolic. A few classes of shippers might win better rates in the short run, but could expect declining service and the gradual elimination of competitive rail choices in the long run. If a lesson is derived from government-regulation of railroads, it involves a limit to the extent that a business corporation can be compelled to act in a manner adverse to its economic well-being. If a hostile regulatory climate prevails, the corporation will reduce its exposure to economic damage. If the regulatory climate becomes so stringent that it does not permit a company to execute this exposure-reducing strategy--as was the case from the 1920s to the 1970s--the affected enterprise still has ultimate recourse to bankruptcy proceedings. Bankruptcy is well established in the railroad industry as a vehicle for resolving all sorts of problems; however, it settles them in a way that few would consider satisfactory.

²³Howard S. Abramson, "Rail Cooperation Urged as Contract Talks Near," *Journal of Commerce*, May 27, 1988. See also "Two Railroads Now Support Staggers Act Changes," *Traffic World*, July 4, 1988, p. 17.

²⁴"New Staggers Act Reform Legislation Circulated," *Traffic World*, June 20, 1988, p. 52.

²⁵Albro Martin, *Enterprise Denied: Origins of the Decline of American Railroads, 1897-1917* (New York, N.Y.: Columbia University Press, 1971), pp. 45-50; 132-139.

Finally, uncertainty persists with respect to the long-range impact of the Staggers Act as it now stands. Has it produced fundamental change or only temporary relief? If one accepts the notion that Staggers has "solved" the railroad problem, then it becomes possible to view adjustments to the act as nonthreatening to the overall well-being of the industry. If, on the other hand, the law only has stalled the industry's downward spiral temporarily, one would hesitate to diminish the regulatory freedom it has provided to the rail carriers. On balance, the rail industry's arguments appear to have greater merit.

Trends to Watch

Forecasts of the future of railroading in the eastern region and nation as a whole range from guardedly optimistic to decidedly pessimistic. Forces beyond the industry's control will help determine its future. The extent, nature, and location of domestic manufacturing, world grain markets, environmental restrictions upon coal-burning electric utilities, potential economic downturns, oil price trends, government regulation, and the pace of technological innovation (which affects both railroad operations and the nature of commodities that would be transported) all will have an impact on its prospects.

Unfortunately, considerable uncertainty exists with respect to many of these trends. Even the optimism surrounding the overstatement of forecasts about the demise of smokestack industries is offset by nagging worry about the timing and depth of the next downward turn in the business cycle. If corporate planners have a high level of comfort about future prospects, they tend to be more aggressive in developing capital spending programs. If doubt persists, they follow a more conservative approach. Doubt about the future already guides the strategies of railroad management. If doubt persists or if additional negative effects are identified, they will lead to an acceleration of the current strategy of slimming down railroad asset bases. Several key variables will have the most influence on these decisions.

Traffic Base

Railroads will base future plans on three key elements--the volume of traffic, the nature of commodities and their flows, and the profitability of traffic. Tonnage continues to slip on a national system with capacity already more than that required to move today's freight volumes. The nature of traffic will affect the size of the system in the years ahead. If railroads succeed in capturing additional container and piggyback traffic, this high-value tonnage would help justify additional capital investment and will provide additional revenues for the bottom line.

Fuel prices also will affect the equation. Higher prices reduce truckers' competitiveness, but lower diesel prices would divert traffic away from the rails. Additional diversion would occur if trucks are permitted to increase weights and lengths. Labor productivity will be an important consideration because this traffic is time-sensitive and service-sensitive.

High-value traffic is the competitive battleground. If railroads are reduced to carrying bulk commodities such as grain and coal, one can expect big cutbacks in system size. The Association of American Railroads estimates that 30,000 route miles could be cut from today's 141,000-mile national system with only a 4 percent loss of traffic. A 45,000-mile reduction would jeopardize 9 percent of traffic.²⁶ Government regulation of rates also would affect the profitability of traffic.

Divestiture vs. Abandonment

As noted in an earlier section, many railroads now prefer to spin off surplus lines to smaller carriers with lower costs. The future of this approach is by no means certain. Political sentiment to restrict what now is a fairly automatic process by which railroads rid themselves of branch and secondary lines also presents threats. If railroads are not permitted to sell or abandon these lines, they will set in motion their historic strategy of letting them die a slow death through minimal maintenance, deteriorating service, and

²⁶Robert W. Blanchette, *America's Railroads After Staggers*, p. 14.

unwillingness to market industrial development. Attrition eventually will settle the matter. Critics decry this approach, but in practical terms little can be done to prevent it. Legislation and regulation cannot force the location of new industry along these lines. Meanwhile, downturns in the business cycle or changed circumstances of individual companies over time will thin the ranks of existing shippers on a particular line.

Transportation Integration

The emergence of the integrated transportation company exemplified by CSX may set an industry pattern. The long-term viability of the concept, however, is far from assured. Integration counts heavily upon achieving efficiencies in operations and marketing. If they fail to materialize, the parent corporation will find itself with an unwieldy collection of subsidiaries.

The railroad industry is contemplating integration at a time when other industry groups are backing away from conglomeratization. The saving of acquisition costs rather than spending them on unproductive lines of business may be more important. Successful integration, on the other hand, might enable the rail industry to gain the upper hand in the battle for high-value traffic. It may be essential if the industry is to continue to exist on anything near the present system scale.

Labor Productivity

Labor costs amount to nearly half of the industry's operating expenses. Future productivity gains will be important determinants of the railroads' fortunes (see Figure 8). Some progress has been achieved already. Different theories abound within the industry as to how best to achieve more. CSX, for example, proposed a system of gain-sharing, but labor has rejected it. This situation led to a decision by CSX to take a \$778-million writeoff that in part is intended to fund a buyout of more than 8,000 employees.²⁷ Conrail's new chief executive officer Richard Sanborn indicates a preference for modifying work rules.²⁸ Failing to reduce crew sizes through negotiation, the Chicago & Northwestern won a partial victory in September 1988 in a dispute over crew sizes when Congress enacted emergency legislation to end an impasse and a one-day strike. In this situation, the railroad was given authority to eliminate about two-thirds of the positions in dispute.

However, neither side in rail labor confrontations can take comfort from what Congress might do in an individual case. Guilford Transportation was prevented from imposing new working conditions on its New England labor force as a result of similar congressional action.

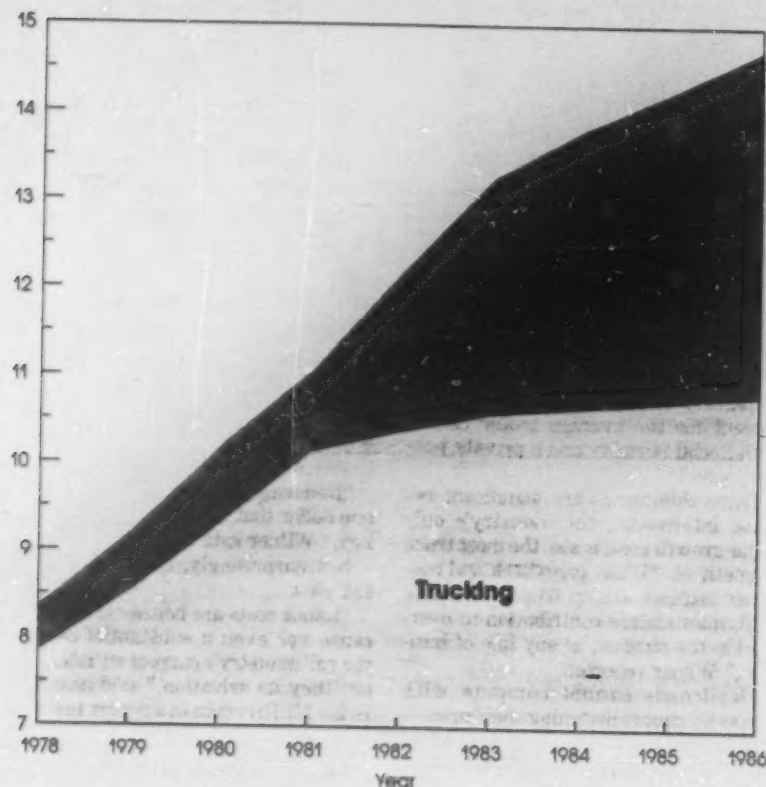
As a general rule, railroads and unions have avoided strikes because of these and other uncertainties. Federal rail labor law is designed to prevent strikes. Therefore, changes in rail labor rules tend to come more slowly than in other segments of the economy.

The ability of management and labor to forge agreements that will make railroads more competitive for marginal traffic represents a crucial determinant of the industry's future. Regulation also will play a role. Some shippers advocate a requirement that would force the railroads to pass along productivity gains in the form of lower rates. Such a step would reduce railroad managements' incentive to bargain for productivity improvements.

²⁷Daniel Machalaba, "CSX Says \$778 Million Pretax Write-Off is Part of Alternative to Aborted Plan," *Wall Street Journal*, July 6, 1988.

²⁸Sanborn's Conrail Will Play Cards Close To Vest," *Traffic World*, April 11, 1988, p. 5.

Figure 8
Average Hourly Earnings for Trucking and Rail Industry Employees



SOURCE: Association of American Railroads, American Trucking Associations, published in *Traffic World*, June 6, 1988, p. 7.

Rail Retirement

Railroad retirement is a little-known but prickly issue. Rail worker pensions operate under a program that predates Social Security. Those concerned about the future of their Social Security checks as the number of retirees continues to increase in proportion to numbers in the work force should consider their counterparts in the railroad industry. There are nearly three retired rail employees for every worker current, and the disparity will increase as railroads continue to reduce employment levels (see Figures 9 and 10). Conrail's work force has declined from nearly 83,000 in 1978 to 33,400 in 1987. CSX implemented a buyout in 1985 and intends to cut its roles by another third—to 30,000. In 1987 Norfolk Southern announced a writedown designed to remove 5,000 from its payroll. Nationally, rail employment declined from 480,000 in 1980 to 324,000 in 1985. The railroad retirement fund faces a crunch in the 1990s that could require additional annual infusions in excess of \$1 billion. This financial liability alone could result in bottom-line deficits for several carriers.²⁹

²⁹"Rail Retirement Funding Remains a Problem," *Traffic World*, July 13, 1987, p. 40.

Figure 9

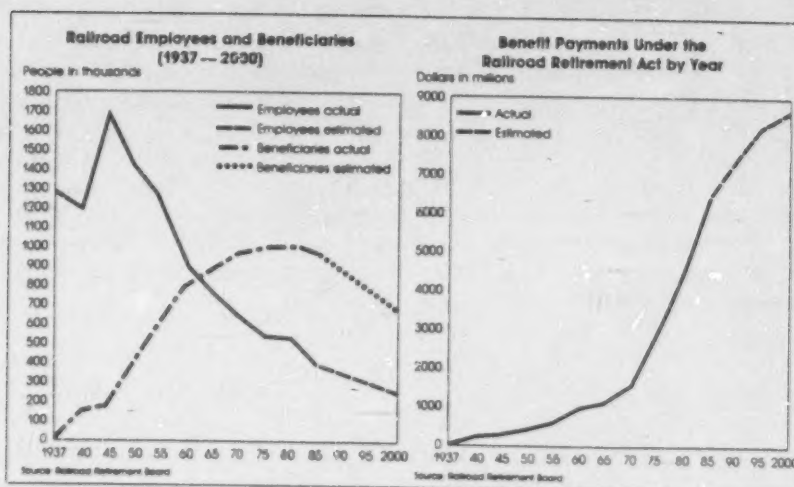


Figure 10

Ratios of Employees to Beneficiaries

Year	Railroad Retirement						Social Security		
	People in Thousands						Ratios		
	Current Employees	Retired Employees	Disabled Employees	Spouses	Survivors	Total Annuities ¹	Current to Retired Employees	Current Employees to Beneficiaries	Current Employees to Beneficiaries
1940	1,195	122	19	0	0	141	9.8	8.5	159.41
1945	1,085	139	28	0	0	167	7.8	6.5	36.02
1950	1,421	180	71	0	132	383	7.9	3.7	13.89
1955	1,239	225	85	107	196	612	5.5	2.0	8.19
1960	909	288	96	157	251	791	3.2	1.15	4.89
1965	753	325	102	174	288	889	2.3	0.85	3.87
1970	640	343	95	210	324	972	1.86	0.66	3.55
1975	548	360	102	220	338	1,019	1.52	0.54	3.12
1980	532	356	95	234	330	1,015	1.49	0.52	3.21
1981	503	355	94	234	327	1,009	1.42	0.50	3.19
1982	440	353	92	234	320	1,003	1.25	0.44	3.16
1983	395	350	90	232	320	992	1.13	0.40	3.20
1984	396	346	88	229	316	981	1.14	0.40	
1985	373	340	86	226	312	964	1.10	0.39	
1986	339	335	84	223	308	951	1.01	0.36	

¹ Excluding supplemental annuities but may include some duplication of retired employee and spousal or survivor benefits.

SOURCE: Railroad Retirement Board

SOURCE: *Traffic World*, July 13, 1987, p. 41.

Economic Trends

Rail companies are hit hard by economic downturns because so many of their expenditures are fixed. The effect of the 1958 to 1961 recession already has been described. Eastern railroads remained marginally profitable during the last downturn in the early 1980s, partially because of rate relief afforded by the Staggers Act and short-term tax benefits consequent to 1981 federal tax law revisions were important contributors.

Although the three major eastern carriers have cash reserves to cushion them against a downturn, a deep and prolonged recession would accelerate the process of system downsizing. Short-line and regional carriers would be especially vulnerable because of their reliance upon a small number of shippers to provide revenues. Economic downturns can reduce rail income disproportionately from high-value shipments--auto, steel, and homebuilding components.

Regulatory Climate

Little needs to be added to earlier comments on deregulation and current controversies surrounding the Staggers Act. Although rail-industry reactions to these proposals include no small amount of rhetoric, they contain important insights. Traditionally, the industry has reacted to a deteriorating regulatory environment by offsetting the negative financial impacts. Abandonments, reduced service, deferred maintenance, and unwillingness to commit additional capital become the prevailing themes. Railroads deteriorate through attrition, which the regulatory apparatus cannot effectively prevent. It is not reasonable to expect that industry leaders will turn their backs on six decades of management practices if they are persuaded that the regulatory climate is turning sour.

* * * * *

While the foregoing discussion would appear to pose more problems than promise for the rail industry, encouraging signs are present. The quality of rail management and marketing has improved greatly in recent years. The future of the industrial economy of the Northeast and Midwest looks bright. Main lines are in better operating condition than at any time since the 1920s. Despite its vulnerability to even modest shifts in circumstances that guide its destiny, railroads continue to offer hope of a significant role in the region's commerce.

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